NewsRelease

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Wingless "Lifting Bodies" Helped to Develop Space Shuttle

Lifting bodies, or wingless aircraft, whose unique shape allows them to fly or glide without conventional wings, were designed and flown by test pilots to fly back to Earth from space and land like an airplane. These unique wingless vehicles generated a database that led to the development of today's space shuttle program. William H. Dana, a retired research engineer, has flight-tested several versions of lifting bodies, while working as a project pilot with NASA's manned lifting body program.

Dana, former chief engineer from NASA's Dryden Flight Research Center, Edwards, Calif., will present "The Lifting Bodies" at a colloquium at 2 p.m. Tuesday, Oct. 3, at NASA Langley's H.J.E. Reid Conference Center.

Media Briefing: A media briefing will be held at 1:15 p.m. at the H.J.E. Reid Conference Center, 14 Langley Blvd., at NASA Langley Research Center. Media who wish to attend should contact Kimberly W. Land (757) 864-9885 or Chris Rink at (757) 864-6786.

Dana will use visuals to describe the development of lifting bodies from their early designs to the most recent. He will discuss flight tests of the first piloted lightweight plywood lifting body, the NASA Ames-designed M2 shape and the heavyweight M2 version, and NASA Langley's lifting body, the HL-10. Dana will talk about the formation of a joint effort between NASA and the U.S. Air Force, which tested the Air Force's X-24A and X-24B lifting bodies. He will also give an overview of the most recent lifting body, NASA Johnson's X-38 and Lockheed Martin's X-33 reusable launch vehicle prototype.

After almost 40 years of distinguished service to NASA, Dana retired from NASA's Dryden Flight Research Center in 1998. During his career as a research pilot, Dana was involved in some of the most significant aeronautical programs carried out at Dryden, including the X-15 hypersonic research aircraft, the F-100 variable stability research aircraft, and the F-18 High Angle of Attach research program. He has received numerous awards for his contributions, including NASA's Distinguished Service Medal in 1997 and is member of the Society of Experimental Test Pilots. Dana has a bachelor's degree in science from the U.S. Military Academy and a master's degree in aeronautical engineering from the University of Southern California.

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